**Riverside (Riparian) Habitat Survey**

To see what recovery had occurred following the impact of the 2011 Floods on the Oxley Creek Catchment at Nosworthy Park.

Date: 16/7/2012 Time: 11.30am

**Safety Issues:** Check School Policy for procedures, undertake a site pre-visit to determine hazards such as chemical, waste and trip/fall. Provision of adequate chaperones, ensure students have personal protective equipment i.e. hat, sunscreen, gloves, enclosed footwear etc. Awareness of allergens and first aid kit. Hand washing to stop contamination and a signed parental consent, together with up to date communications in case of an emergency. (Roy, K. Safety in the field, *Science Scope* [serial online]. March 2011;34(7): 86-87. Available from: Education Research Complete, Ipswich, MA. Accessed July 15, 2012.)

**Site:** Oxley Creek is approximately 100 metres below the level of Nosworthy Park down a 45o  sloping hill accessed by a natural pathway.

**General Observations:** There are no immature plants/trees growing at this site. The understorey is quite depleted. Some vines are evident and the Oxley Creek Catchment Association is trying to restore this growth by planting native grasses i.e. guinea grass and Casuarina trees, callistemons, reeds, vines and bulrushes to help prevent erosion and invite fauna back to the site. There are a lot of dead trees and logs on the floor of the site. Also, there is evidence of the flood still by the amount of debris seen in the branches of mature trees.

**Land uses near the site:** This site is situated in the lower part of the Oxley Creek Catchment and bordered by residential areas and a Bowls Club.

**Biotic Features:** Kookaburras, magpies, bush turkeys, native dove, currawong, lorikeet and wren were all present at the time of the survey. Native bee nests and ants nests were located in the trees close to the creek. Mangroves, Melaleucas, Casuarina Trees and an old Ebony Tree were found on the creek bank. Butterflies, yellow and black with white tips were observed. A frog was heard but not sighted.

**Abiotic Features:** There was a light wind, it was overcast and partly sunny. It was humid near the creek. We experienced the odd light shower and in the past 24hrs there had been rain in the area. The soil and leaf litter were wet.

**Water/Creek Description**

Tide: Outgoing

Water Velocity: High

Appearance of Water: muddy brown

Smell of Water: rotten eggs, sewage

**Plant/animal material in the water:** No algae was observed in the waterway. Presence of dead plant debris in the water was significant. No living plants in the water observed. No aquatic life detected either. A car tyre and some rubbish was observed in the water and on the banks.

**Riparian Vegetation:** Average width of vegetation is approximately 5 metres with the length of the riverbank at high tide having vegetation overhanging the water. Native vegetation has been planted by the Oxley Creek Catchment Association i.e. Casaurina Trees, native grasses and reeds to help stop erosion.

**General Conditions Affecting the Creek:** 2011 Floods have devastated the area. All understorey plants were destroyed in particular immature plants and only mature trees above the flood line have survived together with mangrove plants. Water Toxicity was particular high immediately after the floods and the BCC strongly advised anyone having contact with the water as it was polluted by industry further up the catchment. To stop erosion from the creek and further run off from the roads in the residential areas, the Oxley Creek Catchment Association have planted Casuarina trees, callistemon plants and native grasses i.e. guinea grass along the creek in the riparian area. These plants look well established. While bulrushes and coir logs have been used to regenerate native reeds in the runoff areas leading to the creek. These also appear well established. There is evidence of dead trees and vegetation still caught in the upper branches of trees. The degraded vegetation on the banks of Oxley Creek in this area have lead to erosion of the site. (see photos)

 Photo taken looking down on site to Oxley Creek. Mangroves line the creek bank with young Casuarina trees and native grasses planted by the Oxley Creek Catchment Association to prevent erosion from runoff.



Photos taken looking upstream showing erosion of river bank with plantings of young Casuarina Trees and other native grasses by the Oxley Creek Catchment Association to help prevent erosion and stabilise embankment.

 Coir logs and native reeds planted to stabilise erosion from runoff of rain from residential areas into creek planted by the Oxley Creek Catchment Association.

Photo showing evidence of flood debris still caught in tree branches.

**Habitat Rating**: This area of Oxley Creek is slowly recovering from the floods in 2011 evident by the flora and fauna found in the area. Regrowth of understory plants is being helped by the Oxley Creek Catchment Association who are also planting to prevent further erosion and destruction of the riparian vegetation near the creek. There have been significant alterations from its natural state but it still offers moderate habitat; for now it appears stable.